

Title (en)
Fuel injection type internal combustion engine

Title (de)
Brennkraftmaschine mit Kraftstoffeinspritzung

Title (fr)
Moteur à combustion interne à injection de carburant

Publication
EP 1749997 B1 20151104 (EN)

Application
EP 06016381 A 20060804

Priority
US 19788605 A 20050805

Abstract (en)
[origin: US7047934B1] An internal combustion engine includes an engine body including a cylinder that defines a combustion chamber, an intake opening that faces the combustion chamber, and an intake passage in communication with the combustion chamber through the intake opening, a piston provided in the cylinder, an intake valve that opens and closes the intake opening, a throttle valve provided in the intake passage, and an injector that injects fuel between the throttle valve in the intake passage and the intake opening. A ratio of a volume of the portion that extends from the throttle valve in the intake passage to the intake opening, to a stroke volume of the cylinder is at most approximately 0.61. The time period in which fuel injection from the injector is terminated during an idling operation is set within a period of time after one intake stroke has been completed and before the next intake stroke is begun.

IPC 8 full level
F02M 35/16 (2006.01); **F01L 1/02** (2006.01); **F02B 31/08** (2006.01); **F02D 9/02** (2006.01); **F02D 41/08** (2006.01); **F02D 41/34** (2006.01)

CPC (source: EP US)
F01L 1/024 (2013.01 - EP US); **F02B 31/085** (2013.01 - EP US); **F02D 9/02** (2013.01 - EP US); **F02D 41/08** (2013.01 - EP US);
F02D 41/345 (2013.01 - EP US); **F02B 2275/16** (2013.01 - EP US); **F02M 35/162** (2013.01 - EP US); **Y02T 10/12** (2013.01 - EP US);
Y02T 10/40 (2013.01 - EP US)

Cited by
FR3087225A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
US 7047934 B1 20060523; CN 100439660 C 20081203; CN 1916373 A 20070221; EP 1749997 A2 20070207; EP 1749997 A3 20120926;
EP 1749997 B1 20151104

DOCDB simple family (application)
US 19788605 A 20050805; CN 200610108930 A 20060728; EP 06016381 A 20060804